

What is claimed is:

1. A method of rapidly cooling a liquid in a container, the container having a longitudinal axis, comprising the steps of:
  - a) rapidly rotating the container about its longitudinal axis;
  - b) providing a source of a thin film of cooling medium to cool the container while performing said rotating step;
  - c) positioning the container at a first angle to the horizontal of less than 45°; and
  - d) controlling the position of the container with respect to the thin film source.
2. A method of rapidly cooling a liquid in a container according to Claim 1, wherein said rotating step is performed at a rate dependent upon the geometry of the container.
3. A method of rapidly cooling a liquid in a container according to Claim 1, said step b) comprising the step of spraying the container with the cooling medium from a spray source.
4. A method of rapidly cooling a liquid in a container according to Claim 3, wherein said spraying step is performed to cover at least a majority of the surface area of the container with the cooling medium.
5. A method of rapidly cooling a liquid in a container according to Claim 4, wherein said spraying step is performed from above the container.

6. A method of rapidly cooling a liquid in a container according to Claim 3, further comprising the step of selectively disabling said rotating step so as to accommodate at least one of the geometry and the physical properties of the container.
7. A method of rapidly cooling a liquid in a container according to Claim 1, wherein said controlling step comprises the step of positioning the container at a second angle from a rotational axis of a rotating mechanism performing said rotating step and thereby urging the container to move along the rotating mechanism.
8. A method of rapidly cooling a liquid in a container according to Claim 3, further comprising the steps of:
  - setting a predetermined time period for said rotating and spraying steps; and
  - automatically ceasing said rotating and spraying steps upon expiration of the predetermined time period.
9. A method of rapidly cooling a liquid in a container according to Claim 1, further comprising the step of monitoring the temperature of at least one of the cooling medium and the liquid in the container.
10. A method of rapidly cooling a liquid in a container according to Claim 1, wherein the liquid is a beverage and the container is a conventional beverage container.
11. A method of rapidly cooling a liquid in a container according to Claim 1, further comprising the steps of:

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providing a housing into which the container is disposed during said steps a) through c);

and

providing a hole in the housing,

wherein a portion of the container is allowed to protrude from the housing via the hole during said steps a) through c).

12. A method of rapidly cooling a liquid in a container according to Claim 11, further comprising the step of covering the hole in the housing to reduce splashing of the cooling medium during operation.

13. A method of rapidly cooling a liquid in a container according to Claim 8, further comprising the steps of:

overriding said automatic cessation step; and

continuing to perform said spraying and rotating steps for a second predetermined period of time for extra cooling of the liquid in the container.

14. A method of rapidly cooling a liquid in a container according to Claim 1, wherein the cooling medium is at least one of a liquid and a gas.

15. A method of rapidly cooling a liquid in a container according to Claim 1, further comprising the steps of:

collecting the cooling medium in a reservoir; and

cooling the cooling medium with a cooling element in thermal communication with the reservoir.

16. A method of rapidly cooling a liquid in a container according to Claim 1, further comprising the step of shielding the container from direct physical contact with the cooling medium by providing a covering around the container in thermal communication with the container,

wherein the cooling effects of the cooling medium pass through the covering and cool the liquid in the container.

17. A method of rapidly cooling a liquid in a container according to Claim 3, further comprising the step of shielding the container from direct physical contact with the cooling medium by providing a covering around the container in thermal communication with the container,

wherein the cooling effects of the cooling medium pass through the covering and cool the liquid in the container.

18. A method of rapidly warming a liquid in a container, the container having a longitudinal axis, comprising the steps of:

rapidly rotating the container about its longitudinal axis;

spraying the container with a warming medium from a spray source while performing said rotating step;

positioning the container at a first angle to the horizontal of less than 45°; and

controlling the position of the container with respect to the spray source.

19. A method of rapidly warming a liquid in a container according to Claim 18, wherein said rotating step is performed at a rate dependent upon the geometry of the container.

20. A method of rapidly warming a liquid in a container according to Claim 18, wherein said spraying step is performed to cover at least a majority of the surface area of the container with the warming medium.

21. A method of rapidly warming a liquid in a container according to Claim 20, wherein said spraying step is performed from above the container.

22. A method of rapidly warming a liquid in a container according to Claim 18, wherein said controlling step comprises the step of positioning the container at a second angle from a rotational axis of a rotating mechanism performing said rotating step and thereby urging the container to move along the rotating mechanism.

23. A method of rapidly warming a liquid in a container according to Claim 18, further comprising the steps of:

setting a predetermined time period for said rotating and spraying steps; and  
automatically ceasing said rotating and spraying steps upon expiration of the predetermined time period.

24. A method of rapidly warming a liquid in a container according to Claim 23, further comprising the step of selectively disabling said rotating step so as to accommodate at least one of the geometry and the physical properties of the container.

25. A method of rapidly warming a liquid in a container according to Claim 18, further comprising the step of monitoring the temperature of at least one of the warming medium and the liquid in the container.

26. A method of rapidly warming a liquid in a container according to Claim 18, wherein the liquid is an infant beverage and the container is a conventional baby bottle.

27. A method of rapidly warming a liquid in a container according to Claim 18, further comprising the steps of:

providing a housing into which the container is disposed during said rotating, spraying, and positioning steps; and

providing a hole in the housing,

wherein a portion of the container is allowed to protrude from the housing via the hole during said rotating, spraying, and positioning steps.

28. A method of rapidly warming a liquid in a container according to Claim 27, further comprising the step of covering the hole in the housing to reduce splashing of the warming medium during operation.

29. A method of rapidly warming a liquid in a container according to Claim 23, further comprising the steps of:

overriding said automatic cessation step; and

continuing to perform said spraying and rotating steps for a second predetermined period of time for extra warming of the liquid in the container.

30. A method of rapidly warming a liquid in a container according to Claim 18, further comprising the steps of:

collecting the warming medium in a reservoir; and

heating the warming medium with a heating element in thermal communication with the reservoir.

31. A method of rapidly warming a liquid in a container according to Claim 18, further comprising the step of shielding the container from direct physical contact with the warming medium by providing a covering around the container in thermal communication with the container,

wherein the warming effects of the warming medium pass through the covering and heat the liquid in the container.

32. A method of rapidly making ice cream in a container, the container having a longitudinal axis, comprising the steps of:

a) rapidly rotating the container about its longitudinal axis;

b) providing a source of a thin film of a cooling medium having a temperature below 0° C to cool the container while performing said rotating step;

c) positioning the container at a first angle to the horizontal of less than 45°; and

d) controlling the position of the container with respect to the spray source.

33. A method of rapidly making ice cream in a container according to Claim 32, said step b) comprising the step of spraying the container with the cooling medium from a spray source.

34. A method of rapidly making ice cream in a container according to Claim 33, wherein said spraying step is performed to cover at least a majority of the surface area of the container with the cooling medium.

35. A method of rapidly making ice cream in a container according to Claim 33, wherein said spraying step is performed from above the container.

36. A method of rapidly making ice cream in a container according to Claim 32, wherein said controlling step comprises the step of positioning the container at a second angle from a rotational axis of a rotating mechanism performing said rotating step and thereby urging the container to move along the rotating mechanism.

37. A method of rapidly making ice cream in a container according to Claim 33, further comprising the steps of:

setting a predetermined time period for said rotating and spraying steps; and  
automatically ceasing said rotating and spraying steps upon expiration of the predetermined time period.

38. A method of rapidly making ice cream in a container according to Claim 32, further comprising the step of monitoring the temperature of at least one of the cooling medium and the liquid in the container.

39. A method of rapidly making ice cream in a container according to Claim 32, wherein the cooling medium is at least one of a liquid and a gas.

40. A method of rapidly making ice cream in a container according to Claim 32, further comprising the steps of:

collecting the cooling medium in a reservoir; and

cooling the cooling medium with a cooling element in thermal communication with the reservoir.

41. A method of rapidly making ice cream in a container according to Claim 32, further comprising the step of shielding the container from direct physical contact with the cooling medium by providing a covering around the container in thermal communication with the container,

wherein the cooling effects of the cooling medium pass through the covering and cool the contents in the container.

42. A method of rapidly making ice cream in a container according to Claim 33, further comprising the step of shielding the container from direct physical contact with the cooling medium by providing a covering around the container in thermal communication with the container,

wherein the cooling effects of the cooling medium pass through the covering and cool the liquid in the container.

43. A method of rapidly changing at least one of the temperature and the state of a liquid in a container, the container having a longitudinal axis, comprising the steps of:

a) rapidly rotating the container about its longitudinal axis;

- b) providing a source of a thin film of a medium having a different temperature than the liquid in the container to thermally affect the container while performing said rotating step;
- c) positioning the container at an angle to the horizontal of less than 45°; and
- d) passively controlling the position of the container with respect to the thin film source.

44. A method of rapidly changing at least one of the temperature and the state of a liquid in a container according to Claim 43, wherein the medium is at least one of a liquid and a gas.

45. A method of rapidly changing at least one of the temperature and the state of a liquid in a container according to Claim 43, said step b) comprising the step of spraying the container with the medium from a spray source.

46. A method of rapidly changing at least one of the temperature and the state of a liquid in a container according to Claim 45, further comprising the step of shielding the container from direct physical contact with the medium by providing a covering around the container in thermal communication with the container,

wherein the thermal effects of the medium pass through the covering and change at least one of the temperature and the state of a liquid in a container.

47. A method of rapidly changing at least one of the temperature and the state of a liquid in a container according to Claim 43, said step d) comprises the step of positioning the container at a second angle from a rotational axis of a rotating mechanism performing said rotating step and thereby urging the container to move along the rotating mechanism.

48. Apparatus for rapidly cooling a liquid in a container having a first longitudinal axis, comprising:

a housing having a bottom and side walls defining an interior volume;

a rotating mechanism having a second longitudinal axis disposed in said housing adapted to rotate a container placed in said interior volume about said first longitudinal axis;

a lateral positioner disposed at an angle to said second longitudinal axis in said housing adapted to position the container;

a spray jet spraying a cooling medium onto the container,

wherein said lateral positioner causes the container to be at said angle to said second longitudinal axis.

49. Apparatus for rapidly cooling a liquid in a container according to Claim 48, further comprising:

a reservoir in said interior volume adapted to contain a quantity of the cooling medium;  
and

a pump in communication with said reservoir and said spray jet,

wherein said pump draws the cooling medium from said reservoir and pumps it to said spray jet.

50. Apparatus for rapidly cooling a liquid in a container according to Claim 49, wherein said lateral positioner and said rotating mechanism support the container within said interior volume out of contact with said reservoir.

51. Apparatus for rapidly cooling a liquid in a container according to Claim 49, further comprising a support structure disposed within said interior volume adapted to support the container within said interior volume out of contact with said reservoir.

52. Apparatus for rapidly cooling a liquid in a container according to Claim 49, wherein said lateral positioner and said rotating mechanism support the container within said interior volume in at least partial contact with said reservoir so that the container is at least partially submerged in said reservoir.

53. Apparatus for rapidly cooling a liquid in a container according to Claim 49, further comprising a support structure disposed within said interior volume wherein said support structure supports the container within said interior volume in at least partial contact with said reservoir so that the container is at least partially submerged in said reservoir.

54. Apparatus for rapidly cooling a liquid in a container according to Claim 48, said lateral positioner comprising a plurality of ribs projecting inwardly from an inner surface of at least one of said walls.

55. Apparatus for rapidly cooling a liquid in a container according to Claim 54, wherein a profile of said ribs is skewed with respect to said second longitudinal axis thereby urging the container to move along said rotating mechanism.

56. Apparatus for rapidly cooling a liquid in a container according to Claim 55, wherein said ribs are spaced apart sufficiently to allow a user to insert fingers respectively between said ribs to retrieve or place the container in said interior volume.

57. Apparatus for rapidly cooling a liquid in a container according to Claim 48, said lateral positioner comprising an interior surface of one of said side walls, said interior surface being skewed with respect to said second longitudinal axis thereby urging the container to move along said rotating mechanism.

58. Apparatus for rapidly cooling a liquid in a container according to Claim 49, said rotating mechanism including a roller, wherein the container is disposed on top of said roller when placed in said interior volume.

59. Apparatus for rapidly cooling a liquid in a container according to Claim 58, wherein said lateral positioner supports the container from the side of the container and said roller supports the container from the bottom of the container when the container is disposed in said interior volume.

60. Apparatus for rapidly cooling a liquid in a container according to Claim 59, wherein said lateral positioner and said roller support the container within said interior volume in a position that is one of i) out of contact with said reservoir and ii) in at least partial contact with said reservoir so that the container is at least partially submerged in said reservoir.

61. Apparatus for rapidly cooling a liquid in a container according to Claim 59, further comprising a temperature monitor disposed in said interior volume measuring a temperature of at least one of the cooling medium and the liquid in the container.

62. Apparatus for rapidly cooling a liquid in a container according to Claim 61, said temperature monitor being disposed in at least one of the following locations: said reservoir, said rotating mechanism, and an inner wall of said housing.

63. Apparatus for rapidly cooling a liquid in a container according to Claim 48, further comprising a timing circuit connected to and controlling said rotating mechanism, wherein said timing circuit automatically shuts off said rotating mechanism after a preset time period.

64. Apparatus for rapidly cooling a liquid in a container according to Claim 49, further comprising a timing circuit connected to and controlling said rotating mechanism and said pump, wherein said timing circuit automatically shuts off said rotating mechanism and said pump after a preset time period.

65. Apparatus for rapidly cooling a liquid in a container according to Claim 63, wherein a user can select a duration of said preset time period from a control panel.

66. Apparatus for rapidly cooling a liquid in a container according to Claim 64, wherein a user can select a duration of said preset time period from a control panel.

67. Apparatus for rapidly cooling a liquid in a container according to Claim 49, further comprising a control mechanism in communication with said rotating mechanism and said pump which selectively activates said pump and does not activate said rotating mechanism.

68. Apparatus for rapidly cooling a liquid in a container according to Claim 64, further comprising a control mechanism in communication with said rotating mechanism and said pump which selectively extends said preset time period to thereby cool the liquid to a greater degree.

69. Apparatus for rapidly cooling a liquid in a container according to Claim 55, wherein said lateral positioner causes the container to move towards said spray jet when said rotating mechanism is rotating.

70. Apparatus for rapidly cooling a liquid in a container according to Claim 48, wherein said housing is a portion of a refrigerator.

71. Apparatus for rapidly cooling a liquid in a container according to Claim 49, further comprising an active cooling unit in thermal communication with said reservoir.

72. Apparatus for rapidly cooling a liquid in a container according to Claim 71, wherein said active cooling unit comprises refrigeration coils and a compressor.

73. Apparatus for rapidly cooling a liquid in a container according to Claim 49, wherein said housing is a portion of a refrigerator, and wherein refrigeration coils and a compressor of the refrigerator actively cool the cooling medium in said reservoir.

74. Apparatus for rapidly cooling a liquid in a container according to Claim 71, said active cooling unit comprising Peltier devices disposed in said housing in thermal communication with said reservoir.
75. Apparatus for rapidly cooling a liquid in a container according to Claim 59, said roller further comprising raised portions disposed along said roller, wherein when the container is placed on said roller, the container only contacts said raised portions.
76. Apparatus for rapidly cooling a liquid in a container according to Claim 48, said housing further comprising a hole, wherein a portion of the container is allowed to protrude from said housing via said hole while said rotating mechanism and spray jet are operating.
77. Apparatus for rapidly cooling a liquid in a container according to Claim 76, further comprising a removable splash guard attachable to said housing to cover said hole at least partially.
78. Apparatus for rapidly cooling a liquid in a container according to Claim 48, wherein the liquid is a beverage and the container is a conventional beverage container.
79. Apparatus for rapidly cooling a liquid in a container according to Claim 48, wherein said cooling medium is at least one of a liquid and a gas.
80. Apparatus for rapidly cooling a liquid in a container according to Claim 48, further comprising:

a covering removably disposable around the container in thermal communication with the container shielding the container from direct contact with said cooling medium,

wherein the cooling effects of the cooling medium pass through said covering and cool the liquid in the container.

81. Apparatus for rapidly cooling a liquid in a container according to Claim 80, wherein said covering is elastic and when disposed around the container conforms to the container geometry allowing substantially no air gaps between said covering and the container.

82. Apparatus for rapidly cooling a liquid in a container according to Claim 80, wherein said covering is rigid and is dimensioned to conform to a specific container so as to allow substantially no air gap between said covering and the container.

83. Apparatus for rapidly cooling a liquid in a container according to Claim 82, said covering further comprising a plurality of rigid coverings each dimensioned to conform to a different specific container.

84. Apparatus for rapidly warming a liquid in a container having a first longitudinal axis, comprising:

a housing having a bottom and side walls defining an interior volume;

a rotating mechanism having a second longitudinal axis disposed in said housing adapted to rotate a container placed in said interior volume about said first longitudinal axis;

a lateral positioner disposed at an angle to said second longitudinal axis in said housing adapted to position the container;

a spray jet spraying a warming medium onto the container,  
wherein said lateral positioner causes the container to be at an angle to said second longitudinal axis.

85. Apparatus for rapidly warming a liquid in a container according to Claim 84, further comprising:

a reservoir in said interior volume adapted to contain a quantity of the warming medium;  
and  
a pump in communication with said reservoir and said spray jet,  
wherein said pump draws the warming medium from said reservoir and pumps it to said spray jet.

86. Apparatus for rapidly warming a liquid in a container according to Claim 85, wherein said lateral positioner and said rotating mechanism support the container within said interior volume out of contact with said reservoir.

87. Apparatus for rapidly warming a liquid in a container according to Claim 85, wherein said lateral positioner and said rotating mechanism support the container within said interior volume in at least partial contact with said reservoir so that the container is at least partially submerged in said reservoir.

88. Apparatus for rapidly warming a liquid in a container according to Claim 85, further comprising a support structure disposed within said interior volume wherein said support

structure supports the container within said interior volume in at least partial contact with said reservoir so that the container is at least partially submerged in said reservoir.

89. Apparatus for rapidly warming a liquid in a container according to Claim 84, said lateral positioner comprising a plurality of ribs projecting inwardly from an inner surface of at least one of said walls.

90. Apparatus for rapidly warming a liquid in a container according to Claim 89, wherein a profile of said ribs is skewed with respect to said second longitudinal axis, thereby urging the container to move along said rotating mechanism.

91. Apparatus for rapidly warming a liquid in a container according to Claim 90, wherein said ribs are spaced apart sufficiently to allow a user to insert fingers respectively between said ribs to retrieve or place the container in said interior volume.

92. Apparatus for rapidly warming a liquid in a container according to Claim 84, said lateral positioner comprising an interior surface of one of said side walls, said interior surface being skewed with respect to said second longitudinal axis, thereby urging the container to move along said rotating mechanism.

93. Apparatus for rapidly warming a liquid in a container according to Claim 85, further comprising a temperature monitor disposed in said interior volume measuring a temperature of at least one of the warming medium and the liquid in the container.

94. Apparatus for rapidly warming a liquid in a container according to Claim 84, further comprising a timing circuit connected to and controlling said rotating mechanism, wherein said timing circuit automatically shuts off said rotating mechanism after a preset time period.

95. Apparatus for rapidly warming a liquid in a container according to Claim 85, further comprising a timing circuit connected to and controlling said rotating mechanism and said pump, wherein said timing circuit automatically shuts off said rotating mechanism and said pump after a preset time period.

96. Apparatus for rapidly warming a liquid in a container according to Claim 86, wherein the container is a conventional baby bottle, and wherein said lateral positioner causes the bottle to move towards said spray jet when said rotating mechanism is rotating.

97. Apparatus for rapidly warming a liquid in a container according to Claim 85, further comprising a control mechanism in communication with said rotating mechanism and said pump which selectively activates said pump and does not activate said rotating mechanism.

98. Apparatus for rapidly warming a liquid in a container according to Claim 85, further comprising an active warming unit in thermal communication with said reservoir.

99. Apparatus for rapidly warming a liquid in a container according to Claim 98, said active warming unit comprising Peltier devices disposed in said housing in thermal communication with said reservoir.

100. Apparatus for rapidly warming a liquid in a container according to Claim 83, wherein said warming medium is at least one of a liquid and a gas.

101. Apparatus for rapidly warming a liquid in a container according to Claim 84, further comprising:

a covering removably disposable around the container in thermal communication with the container shielding the container from direct contact with said warming medium,

wherein the warming effects of the warming medium pass through said covering and warm the liquid in the container.

102. Apparatus for rapidly warming a liquid in a container according to Claim 101, wherein said covering is elastic and when disposed around the container conforms to the container geometry allowing substantially no air gaps between said covering and the container.

103. Apparatus for rapidly warming a liquid in a container according to Claim 101, wherein said covering is rigid and is dimensioned to conform to a specific container so as to allow substantially no air gap between said covering and the container.

104. Apparatus for rapidly making ice cream, comprising:

a container having a first longitudinal axis into which ice cream ingredients are disposable;

a housing having a bottom and side walls defining an interior volume into which said container is placed;

a rotating mechanism having a second longitudinal axis disposed in said housing adapted to rotate said container about said first longitudinal axis;

a lateral positioner disposed at an angle to said second longitudinal axis in said housing adapted to position said container; and

a spray jet spraying a cooling medium having a temperature below 0° C onto said container,

wherein when said container is placed within said interior volume, said lateral positioner causes said container to be at an angle to said second longitudinal axis.

105. Apparatus for rapidly making ice cream according to Claim 104, further comprising:

a reservoir in said interior volume adapted to contain a quantity of the cooling medium;

and

a pump in communication with said reservoir and said spray jet,

wherein said pump draws the cooling medium from said reservoir and pumps it to said spray jet.

106. Apparatus for rapidly making ice cream according to Claim 104, said lateral positioner comprising a plurality of ribs projecting inwardly from an inner surface of at least one of said walls.

107. Apparatus for rapidly making ice cream according to Claim 106, wherein a profile of said ribs is skewed with respect to said second longitudinal axis, thereby urging said container to move along said rotating mechanism.

108. Apparatus for rapidly making ice cream according to Claim 104, said lateral positioner comprising an interior surface of one of said side walls, said interior surface being skewed with respect to said second longitudinal axis, thereby urging said container to move along said rotating mechanism.

109. Apparatus for rapidly making ice cream according to Claim 105, further comprising a timing circuit connected to and controlling said rotating mechanism and said pump, wherein said timing circuit automatically shuts off said rotating mechanism and said pump after a preset time period.

110. Apparatus for rapidly making ice cream, according to Claim 104, said container further comprising at least one fin projecting inwardly from an inner surface of said container, wherein when said container is rotated, said fin agitates the contents of said container to facilitate hardening of the contents into ice cream.

111. Apparatus for rapidly making ice cream according to Claim 105, further comprising an active cooling unit in thermal communication with said reservoir.

112. Apparatus for rapidly making ice cream according to Claim 111, wherein said active cooling unit comprises refrigeration coils and a compressor.

113. Apparatus for rapidly making ice cream according to Claim 111, said active cooling unit comprising Peltier devices disposed in said housing in thermal communication with said reservoir.

114. Apparatus for rapidly making ice cream according to Claim 104, wherein said cooling medium is at least one of a liquid and a gas.

115. Apparatus for rapidly changing at least one of the temperature and the state of a liquid in a container, comprising:

- a housing having a bottom and side walls defining an interior volume;

- a rotating mechanism having a longitudinal axis disposed in said housing adapted to rotate a container about the container's longitudinal axis;

- a lateral positioner disposed at an angle to said longitudinal axis in said housing adapted to position the container; and

- a source of a thin film of a medium having a first temperature different from a second temperature of the liquid inside the container to thermally affect the container,

wherein when the container is placed within said interior volume, said lateral positioner causes the container to be at an angle to said longitudinal axis.

116. Apparatus according to Claim 115, said source of thin film comprising a spray jet spraying the medium towards the container.

117. Apparatus according to Claim 115, said source of thin film comprising at least one piece of ice disposed above the container in contact with the container, wherein as said ice melts, said ice creates a thin film of cold water which cools the container.

118. Apparatus according to Claim 116, further comprising:

- a reservoir in said interior volume adapted to contain a quantity of the medium; and

a pump in communication with said reservoir and said spray jet,  
wherein said pump draws the medium from said reservoir and pumps it to said spray jet.

119. Apparatus according to Claim 116, wherein said lateral positioner causes said container to move towards said spray jet when said rotating mechanism is rotating.

120. Apparatus according to Claim 118, further comprising a Peltier device in thermal communication with said reservoir, wherein when said apparatus is being used to cool the liquid, said Peltier device cools the medium in said reservoir, and when said apparatus is being used to warm the liquid, said Peltier device warms the medium in said reservoir.

121. Apparatus according to Claim 115, further comprising:

a covering removably disposable around the container in thermal communication with the container shielding the container from direct contact with the medium,

wherein the thermal effects of the medium pass through said covering and change at least one of the temperature and the state of the liquid in the container.

122. Apparatus according to Claim 115, wherein said housing is a portion of a refrigerator.

123. Apparatus according to Claim 122, wherein said source of thin film comprises at least one piece of ice disposed above the container in contact with the container, wherein as said ice melts, said ice creates a thin film of cold water which cools the container.

124. Apparatus according to Claim 118, further comprising an active cooling unit in thermal communication with said reservoir.

125. Apparatus according to Claim 124, wherein said active cooling unit comprises refrigeration coils and a compressor.

126. Apparatus for rapidly cooling a liquid in a container, comprising:

a housing having a bottom and side walls defining an interior volume, said housing being part of a refrigerator;

a rotating mechanism having a longitudinal axis disposed in said housing adapted to rotate a container about the container's longitudinal axis;

a source of a thin film of a cooling medium to cool the container,

wherein when the container is placed within said interior volume, the thin film of cooling medium thermally communicates with the container while said rotating mechanism rotates the container.

127. Apparatus for rapidly cooling a liquid in a container according to Claim 126, wherein said thin film source comprises at least one of a spray jet directing the cooling medium towards the container and a piece of ice disposed above the container in contact with the container, said ice forming a thin film of cold water as said ice melts and cools the liquid in the container.